

Powder Metallurgy as a Method of Manufacturing
and Searching for Magnetic Solid Materials,
by A. B. Al'tman.

RUSSIAN, per, Iz Akad Nauk, SSSR Otdel
Tekh Nauk Metal i Toplivo, No 4, 1959, pp 135-142.
9662621.

ATIC MCL-625/1

Sci - Min/Metals

Jul 61

159, 522

Some Relationships in the Hot Pressing of Powders
of Refractory Compounds, by M. S. Koval'chenko,
G. V. Samsonov.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk,
Metal i Toplivo, No 4, 1959, pp 144-147.

7060021
HB 4799

*ATIC MCL-625/V

Sci - Min/Met

May 60

116,531

On the Joint Solubility of Elements of the III
and V Groups in Germanium, by V. N. Glazov,
D. A. Petrov, S. N. Chizhevskaya, 4 pp.

RUSSIAN, per, Iz Ak Nauk USSR, Otdel Tekh
Nauk, Metal i Toplov, No 4, 1959, pp 153-155.

MDF G-179

9092760

171,531

Sci

Oct 61

On the Nature of the Quasi-binary Section in the
Germanium-Indium-Antimony System, by B. G. Zhurkin,
V. S. Zamskov, D. A. Petrov, A. D. Suchkova,

RUSSIAN, per, Izv. AN USSR, OTN, Metal. i Topl.,
No 4, 1959, pp 156-158, 9072597.

MTT 2-123

Sci

Nov 60

131, 391

(DC-3449)

Some Problems in the Theory of Heat Resistance and
the Development of New High Strength Titanium
Alloys, by I. I. Kornilov, 20 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel. Tekh. Nauk
Metal i Toplivo, No 4, 1959, pp 190-199.

JPRS 3423

Sci - Minerals/Metals

Jun 60

120, 123

Concerning Plasticity of Titanium Silicides,
by V. S. Neshpor, G. V. Samsonov.

RUSSIAN, per, Iz Akad Nauk, SSSR Otdel
Tekh Nauk Metal i Toplivo, No 4, 1959,
pp 202-204. 9662621

ATIC MCL-625/1

Sci - Min/Metals

Jul 61

157, 523

Characterization of Oxygen-Containing
Functional Groups in Vitraims From a
Metamorphic Series of Don Basin Coals,
by O. Gavrilova.

RUSSIAN, per. Iz Ak Nauk SSSR, Otdel
Tek Nauk Metall i Toplivo, No 4,
1959, pp 228-234.

ER
CSIRO 5124

175, 691

Sci - Chem
Dec 61

New Production Processes as a Basis for Automation
on the Plastic Working of Metals, by A. I.
Tselikov.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk,
Met. Toplivo, No 5, 1959, pp 3-10.

HB 4862

Sci - Engr

Oct 60

129,138

Effect of FeO Content on Magnetic Characteristics
of Sinters Fluxed in Various Degrees, by N. A.
Gladkov, et al. UNCL

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk,
Mat 1 Topliva, No 5, 1979, PP 42-44.

EB 4819

Sci - Min/Met
Jan 60

120,818

Reticular Substructure of Ferrite Grains and
its Effect on the Deformation and Failure of
Engineering Iron, by B.S. Kasatkin.
RUSSIAN, per, Izvest An SSSR Otn Met Topl, No 3,
1959, pp 9-62
GB/41/3622 - Price \$ 7.75

Sci -
Jul 67

335,043

Development, Structure and Some Properties of the
Crystallite Boundaries in Cast Metals and Alloys, by
B. A. Movchan.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk, Met
i Toplivo, No 5, May 1959, pp 77-85.

HB 5663

66/7/1094

Sci-Min/Met
Mar 63

Solubility of Indium and Antimony in
Germanium and Their Influence on Certain
Electrical Properties of Germanium, by
B. G. Zhurkin, V. S. Zenskov, D. A. Petrov,
6 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh.
Nauk, Metal i Topliva, No 5, 1959, pp 86-90.

MDF 2-126

9093248

173 736

CEA-tr-R-1442 Uncl.

PREPARATION D'EMETTEURS ALPHA PLANS EN POLONIUM
DE GRANDE ACTIVITE. (Preparation of Flat
Polonium Alpha Emitters of High Activity).
I. N. Plaksin (Plaksine), V. N. Smirnov
(Smirnoff), and L. P. Starchik. Translated
into French from Izvest. Akad. Nauk S.S.S.R.,
Otdel. Tekh. Nauk, Met. i Toplivo, No. 5,
122-3(Sept.-Oct. 1959). 7p.

Particle Physics; Translations MC-34

C-34 NP NSA Dep.(mc); \$1.10(fs), \$0.80(mf)
 JCL or OTS

N-7

R-352-N

On the Viscosity of Liquid Metals, by A. M.
Korol'kov, 5 pp.

RUSSIAN, per, iz Ak Nauk SSSR, Otdel Tekh Nauk,
Metal i Toplivo, No 5, 1959, pp 123-126.

AEC Tr-4202

Sci - Min/Met
19 Oct 60

129,842

Workshop on Mutual Cooperation and Coordination
in the Field of Engineering and Technology,
O. V. Shchegolev.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekhn Nauk,
Metall i Legirov, no 5, sep/Oct 1959, pp 126, 127.

RB 4704

Sci - Min/Met

Apr 60

114,266

Nature of Carbide Phase in Titanium-Alloyed Steels,
by Yu. T. Lukashevich-Duvanova, V. A. Urazova.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk,
Metal i Toplivo, No 5, Sep/Oct 1959, pp 127-130.

EB 4785

Sci - Min/Met

May 60

116,532

Phase Transformations in the Iron-Vanadium
System, by M. I. Zakharovs, L. A. Semenova,
et al, 5 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh
Nauk, Metal i Toplivo, No 5, Sep, Oct, 1959,
135-138.

JPRS 26338

Sci - M & M
Sep 64

266,207

Structure and Properties of Niobium-Tin Alloys,
by M. I. Agafonova, V. V. Baron, E. M. Savitskiy, 7 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk,
Metal i Toplivo, No 5, 1959, pp 138-141. 9092532

AEC Te-5323-9066992
MDF A-158

Sci
Oct 61

171,295

an Investigation Into the Thermocatalytic
Principle of Methane Detection in a Mine
Atmosphere, by E. P. Karpov, U. S. Krav-
chenko.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel
Total 1 Topliy, No 5, 1959, pp 174-
178.

OTS TI-44-1447

ALL M.3276

174-174. CIR/FOO X-5333

Sci - Phys
Mar 62

183, 703

New Ways of Intensifying Metallurgical Processes,
by I. P. Bardin.

RUSSIAN, per, Iz Ak. Nauk SSSR, Otdel Tekh. Nauk,
Metal i Toplivo, No 6, 1959, pp 3-7.

BISI 2083

Sci - Min/Met

Jun 61

156,877

16

(DC-3824)

Prospects of Using Radioactive Isotopes and Nuclear
Radiation in Metallurgy and Other Technical
Sciences, by A. M. Samarin, M. S. Fomichev, 10 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk,
Metal i Toplivo, No 6, 1959, pp 121-126.

JPRS 3607

Sci - Phys - Chem

Aug 60

121,574

The Structure and Phase Composition of Diffusion
Coating of Molybdenum by Silicon, by P.M. Arzhavyy,
et al.

RUSSIAN, per Iz Ak Nauk, Otdel Tekh Nauk, Metal
i Toplivo, No 6, 1959, pp 127-129. CIA 9660420

ATTC MCL 676

Sci - Min/Met

May 61

152,575

On the Nature of Slip Lines on Steel, by N. S.
Alferova, et al.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk,
Metal i Toplivo, No 6, 1959, pp 131, 132.

HB 5103

Sci - Min/Met

Apr 61

147,465

(WI-5556).

Semiconductor Thermocouples for High Temperature
Use, by P. S. Kislyy, G. V. Samsonov, 12 pp.

RUSSIAN, per, 12 Ak Nauk SSSR, Otdel tekhn Nauk,
Metal i Toplivo, No 6, Nov-Dec 1959, pp 133-137.

JPRS 2523

Doc. No. 1
Sci. Lib./Nat
May 69

116, 264

Rovinsky, B. M. and Sinaykiy, V. M.
ON THE NATURE OF THE BAUSCHINGER EFFECT.
22 Sep 60 (9)p. (illus. omitted) 11 refs. NBS:
S-30210-61; JPRS: R-1143-D.

Order from LC or SLA mi\$1.80, n\$1.80 61-13844

Trans. of Akad[emiya] Nauk SSSR, Otdeleniya
Tekhnicheskikh Nauk. Izvestiya: Metallurgiya i
Toplivo, 1959, no. 6, p. 137-141.

It is shown that the Bauschinger effect depends on the
emergence during nonaxial plastic deformation of
residual oriented microstrains. The reduction of the
conventional yield point during reloading of the re-
verse print is correlated satisfactorily with the mag-
nitude of residual oriented microstrains arising after
preliminary deformation, most favorably in the region
of 0.5 to 1.5%, and the magnitude of residual oriented
microstrains can be summed up with macroscopic
strains created by the external load. From the size of
(Metallurgy--Structural, TT, v. 5, no. 4) (over)

61-13844

1. Single crystals
(Metallurgy)--Deformation
2. Title: Bauschinger effect
- I. Rovinsky, B. M.
- II. Sinaykiy, V. M.
- III. NBS-S-30210-61
- IV. JPRS-R-1143-D
- V. Joint Publications Research
Service, Washington, D. C.

143,160

Office of Technical Services

1960

IZVESTIYA AN SSSR, OTN, METALLURGIYA
I TOPLIVO - bimonthly
(Russian Metallurgy and Fuels, se-
lected articles; articles not trans-
lated in full are abstracted)
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1961 issues not published but abstracts
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From 1963 see: "IZVESTIYA AN SSSR,
METALLURGIYA I GORNOE DELO"

Vigdorovich, V. N., Ivleva, V. S., and Krol', L. Ya.
ON THE PURIFICATION OF ANTIMONY BY THE
METHOD OF ZONE REFINING. [1960] 8p. 13 refs.
Order from MDP \$4.50 MDP V-150

Trans. of A[kademiya] N[auk] SSSR. O[tdeleniye]
T[ekhnicheskikh] N[auk]. Izvestiya: M[etallurgiya] i
T[oplivo] 1960, no. 1, p. 44-49.

143,091

61-12072

- I. Antimony--Purification
2. Title: Zone refining
- I. Vigdorovich, V. N.
- II. Ivleva, V. S.
- III. Krol', L. Ya.
- IV. MDP V-150
- V. Friedman, Morris D.,
Inc., West Newton, Mass.

Office of Technical Services

(Engineering--Chemical, TT, v. 5, no. 1)

Use of Spiral-Flow Conditions to Increase Convective
Heat Transfer, by V. K. Ermolin,

Heat Transfer
RUSSIAN, per, Iz Ak Nauk SSSR, ~~QIN~~, No 1, 1960,
pp 55-61.

*AEC

Sci - Engr
Oct 60

List 43

Baron, V. V., Efimov, Yu. V., and Savitskii, E. M.
STRUCTURE AND PROPERTIES OF ALLOYS IN
THE VANADIUM-TUNGSTEN SYSTEM. Jan 62 (3)p.
2 refs.

Available in ARS Journal, v. 32, no. 1, \$3.00

Trans. of Akademiya Nauk SSSR. Otdel[enie] Tekh-
[nicheskikh] Nauk. Izvestiya: Metallurgiya i Toplivo,
1960, no. 1, p. 70-74.

DESCRIPTORS: *Vanadium alloys, *Tungsten alloys,
Alloys, Plasticity, Microstructure, Hardness,
Mechanical properties, Oxidation, Temperature.

(Metallurgy, TT, v. 7, no. 10)

62-12691

- I. Baron, V. V.
- II. Efimov, Yu. V.
- III. Savitskii, E. M.
- IV. Primary Sources,
New York
- V. American Rocket Society,
New York

Office of Technical Services

De Dyk Man and Nesmeyanov, An. N.
INVESTIGATION ON THE THERMODYNAMICS OF
SOLID SOLUTIONS OF COBALT WITH NICKEL.
[1960] 12p. 21 refs.
Order from MDP \$6.50 MDP D-143

Trans. of Akademiya Nauk SSSR. Otdeleniye
Tekhnicheskikh Nauk. Izvestiya Metallurgiya i
Toplivo 1960, no. 1, p. 75-84.

142,968

(Metallurgy--Nonferrous Metals, TT, v. 5, no. 3)

61-12174

- I. Cobalt-nickel alloys--
Thermodynamic properties
1. De Dyk Man
II. Nesmeyanov, An. N.
III. MDP D-143
IV. Friedman, Morris D.,
Inc., West Newton, Mass.

Office of Technical Services

Melting Diagram for the Titanium-Vanadium-
Molybdenum Ternary System, by
I. I. Kornikov, R. S. Poliakova, 4 pp.

RUSSIAN, per, Izvestia Akademii Nauk
SSSR, Otdel. Tekh. Nauk, Metallurgiya
1 Toplivo, 1960, No 1, pp 85-89.

ARS Journal
Vol XXXI, No 5
May 1961

Sci - Engr

192, 321

62-14554

Ivanova, V. S.
STRUCTURAL-ENERGETIC INTERPRETATION OF
FATIGUE PHENOMENA IN METALS (Strukturno-
Energeticheskaya Interpretatsiya Yavleniya Ustalosti
Metallov). [1962] [28]p. (foreign text included)
17 refs.
Order from OTS or SLA \$2.60 62-14554

Trans. of Akademiya Nauk SSSR. Q[izdaniye]
T[ekhnicheskikh] N[auk]. Izvestiya Metallurgiya i
Toplivo, 1960, no. 1, p. 93-100.

DESCRIPTORS: Energy, Microstructure, *Metals,
*Fatigue (Mechanics), Lattices, Fracture (Mechanics),
Crystal structure, Elasticity.

The energy of elastic deformation of the crystal lat-
tice up to the critical point, per unit volume at the
maximum point of deformation of the crystal lattice,
as well as the energy per unit volume required for
(Metallurgy--Structural, TT, v. 8, no. 11) (over)

I. Ivanova, V. S.

Office of Technical Services

Failure of Metals Due to Thermal Fatigue,
by Yu. V. Kostochkin, I. A. Odintsov, 3 pp.

RUSSIAN, per, Izvestia Akademii Nauk
SSSR, Otd. Tekh. Nauk, Metallurgia i
Toplivo, No 1, 1960, pp 101-104.

ARS Journal
Vol XXX, No 11
Nov 1960

Sci - Tech / mat
12

192, 310

Study of the Mechanism of the Hydrogen Brittleness
of Titanium and Its Alloys, by L. S. Moroz,
Yu. D. Khesin, 22 pp.

RUSSIAN, per, Iz Ak Nauk, Otdel Tekh Nauk,
Metal i Toplivo, No 1, 1960, pp 111-122.

9079372

RAE

AEC UCRL-Trans-661(L)

Sci
Aug 61

163, 773

Priselkov, Yu. A., Sapozhnikov, Yu. A., and
Tseplyaeva, A. V.
MEASURING THE PRESSURE OF SATURATED BO-
RON VAPOR. [1961] [5]p. 9 refs.
Order from OTS or SLA \$1.10 61-28232

Trans. of Akademiya Nauk SSSR. O[tdelenie]
T[ekhnicheskikh] N[auk]. Izvestiya: Metallurgiya i
Toplivo, 1960, no. 1, p. 134-137.

DESCRIPTORS: *Vapor pressure, Measurement,
*Boron, Heat of sublimation, Thermochemistry,
Thermodynamics.

The study deals with the determination of vapor pres-
sure within the temperature range of 1651-1764°K by
Knudsen's effusion method. The boron vapor pressure
depends largely on the S/K ratio. Saturation is
reached in the chamber only when the S/K₀ ratio is
larger than 15,000-20,000.

61-28232

- I. Priselkov, Yu. A.
- II. Sapozhnikov, Yu. A.
- III. Tseplyaeva, A. V.
- IV. Translations, New York

(Physics--Thermodynamics,
TT, v. 7, no. 7)

Office of Technical Services

Secondary Breaking of Iron Ores by High-Frequency Current, by M. I. Agoshkin, A. S. Voronyuk.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk, Metal i Toplivo, No 1, 1960, pp 138-144.

HB 4857

Sci - Electron

Jun 61

155,173

Elastic Interaction of Rock Body and Casting,
by Yu. A. Pevlyak, 9 pp.

RUSSIAN, per, In Ak Nauk SSSR, Otdel
Tekh Nauk, Metall i Toplivo, No 1,
1960, pp 145-151.

ATS-47M43R

ATS-RJ-3495

Sci

Vol IV, No 11

Jun 62

199, 259

Automated Determination of Mechanical Properties
of Coke, by G. N. Dmitryev, G. I. Enik.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk,
Metal i Toplivo, No 1, 1960, pp 174, 175.

HB 4813

Sci - Fuels

123,081

Aug 60

...and ... Elimination from ...
... during ... conditions, by A. K.
... ..

RUSSIAN, 1st, 1st Air Force SSSR, Otdel Tekh Nauk,
Mirnaya Volga, No 2, 1960, pp 21-25.

HB 4850

Ref - MIA/Ref
16 Nov 60

131,892

Influence of Oxygen on the Surface Tension of Nickel
and the Boundary Angle of Wetting of Aluminum Oxide
by Nickel, by V. N. Yeremenko, Yu. V. Naydich, 5 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, Metal i Toplivo, No 2,
1960, pp 53-55.

MDF E-111
9092703

Sci

Oct 61

Movchan, B. A.

CONCENTRATION LAYERS ON INTERPHASIAL
SURFACES DURING CRYSTALLIZATION OF
ALLOYS. [1960] 9p. 8 refs.

Order from MDF \$5.50

MDF M-140

Trans. of A[kademiya] N[auk] SSSR. O[tdeleniye]
T[ekhnicheskikh] N[auk]. Izvestiya: Met[allurgiya] I
Top[ik] 1960, no. 2, p. 72-78.

143,301

(Metallurgy--Structural, TT. v. 5, no. 4)

61-12259

1. Alloy--Crystallization
2. Alloy--Phase studies
3. Alloy--Surfaces

I. Movchan, B. A.

II. MDF M-140

III. Friedman, Morris D.,
Inc., West Newton, Mass.

Office of Technical Services

63-13718

Gel'd, P. V., and Kusenko, F. G.
THE HEAT CONTENT AND HEAT CAPACITY OF
NIOBIUM OXIDES AND CARBIDES AT HIGH TEMPER-
ATURES. [1962] [12]p. 24 refs.
Order from OTS or SLA \$1.60

63-13718

Trans. of Akad[emiya] Nauk SSSR, ~~Obshcheniye~~
~~Tekhn[icheskikh] Nauk. Izvestiya Metallurgiya]~~
Toplivo, 1960, no. 2, p. 79-86.

DESCRIPTORS: *Thermochemistry, *Niobium
compounds, *Oxides, *Carbides, Temperature, Heat,
*Entropy.

I. Gel'd, P. V.
II. Kusenko, F. G.
III. Translations, New York

(Physics--Thermodynamics, TT, v. 9, no. 12)

Office of Technical Services

Effect of Low Temperatures Upon Fracture and
Toughness of [Medium Alloy] Steel, by M. P.
Braun.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk,
Metal i Toplivo, No 2, 1960, pp 104-109.

HB 4854

Sci - Min/Met

145, 051

Feb 61

Alloys of Transition-Metal Borides With Other
Metals, by M. S. Koval'chenko.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk,
Met Toplivo, No 2, 1960, pp 115-119. 96604/15

HB 4853

Sci - Min/Met

ATK MEL 671

Oct 60

129,104

14 070

GF-1 * UK-23

ZAITSSEVA S. P., et al.

Use of radioactive isotopes and nuclear radiations in investigating flotation processes

Die Anwendung von radioaktiven Isotopen und von Kernstrahlungen bei der Untersuchung des Flotationsprozesses

* Izv. Akad. Nauk SSSR, Otdel. Tekhn. Nauk, Metallurg. i Topl., No. 2, 130-132 (1960)

GF-1: German

* UK-23: English

E u r a t o m

63-10845

Portnoi, K. I., Levinskii, Yu. V., and Fadeeva, V. I.
INTERACTION OF CERTAIN REFRACTORY CAR-
BIDES AND THEIR SOLID SOLUTIONS WITH CARBON.
[1962] 6p. 8 refs.
Order from OTS or SLA \$1.10

63-10845

Trans. of Akademiya Nauk SSSR, Otdelenie Tekhni-
cheskikh Nauk, [Izvestiya Metallurgiya i Toplivo,
1961, no. 2, p. 147-[149].
Another trans. is available from OTS or SLA \$1.10
as AEC-tr-4871 [1961] 5p.

DESCRIPTORS: *Carbides, Titanium compounds,
Zirconium compounds, Tantalum compounds, Hafnium
compounds, Eutectics, *Refractory materials,
Chemical reactions.

For abstract see Technical Translations 8: 661, 1962

(Materials--Refractories, TT, v. 9, no. 12)

I. Portnoi, K. I.
II. Levinskii, Yu. V.
III. Fadeeva, V. I.

Office of Technical Services

Kovalev, A. G.
SOME EMPIRICAL FACTORS OF THE DISPLACEMENT PROCESS FOR IMMISCIBLE LIQUIDS. [1960]

Sp.

Order from ATS 510.60

ATS-80M43R

Trans. of Akad[emiya] Nauk SSSR. Otdel[eniye] Tekhnicheskikh Nauk. Izvestiya: Matematika i Fizika, 1960, no. 2, p. 146-150.

146,996

(Engineering, TT, v. 5, no. 5)

61-12308

- I. Petroleum--Separation
- I. Kovalev, A. G.
- II. ATS-80M43R
- III. Associated Technical Services, Inc., East Orange, N. J.

Office of Technical Services

18

(NY-4426)

Scientific Conference on the Metallurgy, Chemistry,
and Electrochemistry of Titanium, by S. V. Ogurtsov,
2 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk -
Metal i Topliva, No 2, 1960, pp 167, 168.

JPRS 5035

Sci - Metal

Aug 60

Tension Superficielle du Beryllium Liquide, (Surface
Tension of Liquid Beryllium), by V. N. Eremenko,
V. I. Nizhenko, Shou-wei T'ai, 4 pp.

RUSSIAN to FRENCH, per, Iz Ak Nauk SSSR, Otdel Tekh
Nauk, Met i Toplivo, No 3, 1960, p 116.

Reverse Trans
CEA Tr-R-1158

Sci
Jun 61

Structure Diagram and Some Properties of
Alloys of the System Niobium-Molybdenum-
Vanadium, 17 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh
Nauk, Metal i Toplivo, No 4, 1960, pp 143-149.
9671493

FTD MCL-1170/1

Sci - Min/Metal

173,802

15 Nov 61

Glazov, V. M. and Liu, Chen-yuan.

INVESTIGATION OF THE SEPARATE AND JOINT
SOLUBILITY OF ALUMINUM AND ANTIMONY IN
SILICON. [1961] 2p. 10 refs.

Order from MDF \$5.00

MDF G-194

Trans. of A[kademiya] N[auk] SSSR. O[tdeleniye]
T[echnicheskikh] N[auk]. Izvestiya: Met[allurgiya] i
Top[ivo] 1960, no. 4, p. 150-155.

(Physics--Solid State, TT, v. 5, no. 10)

61-12956

1. Semiconductors--Impurities
2. Silicon--Impurities
3. Aluminum--Solubility
4. Antimony--Solubility

- I. Glazov, V. M.
- II. Liu, Chen-yuan
- III. MDF G-194
- IV. Friedman, Morris D., Inc.,
West Newton, Mass.

158986

Office of Technical Services

On the Broadening of the Possibilities of Using
Penetrating Radiation to Enrich Coal, by
V. D. Goroshko, O. M. Todes, A. Z. Yurovskiy,
5 pp.

RUSSIAN, per, Iz Ak Nauk USSR, Otdel Tekh
Nauk, Met i Toplov, No 4, 1960, pp 185-186.

MDF G-189
9092771

Sci
Oct 61

INVESTIGATION OF THE RECRYSTALLIZATION ON NICKEL-BASE,
CAST, HEAT RESISTANT ALLOY, BY Z. S. BYCHKOVA,
YU. V. VINOGRADOV, ET AL, 19 PP.

RUSSIAN, PER, IZ AK NAUK SSR, OTDEL TEKH NAUK,
METAL I TOPLIVO, NO 5, 1960, PP 70-78. 9678198

FTD-TT-62-518

SCI - MINERALS/METALS
11 OCT 62

212,358

INVESTIGATION OF PLASTIC DEFORMATION OF HIGH-MELTING
METALS AT HIGH TEMPERATURE, BY L. I. IVANOV,
M. P. MATVEYEVA, ET AL, 14 PP.

RUSSIAN, PER, IZ AK NAUK SSR, OTDEL TEKH NAUK,
METAL I TOPLIVO, NO 5, L960, PP 79-85. 9678198

FTD-TT-62-518

SCI - MINERALS/METALS
11 OCT 62

212,359

61-19627

Kornilov, I. I., Ozhinkova, O. V., and
 Pryakhina, I. I.
 CORRELATION BETWEEN COMPOSITION, TEMPER-
 ATURE, AND HEAT RESISTANCE OF NICKEL-
 CHROMIUM-TUNGSTEN-TITANIUM-ALUMINUM AL-
 LOYS, 6 Mar 61, 2p. AID rept. 61-25; AD-254 394.
 Order from OTS or SIA \$1.10 61-19627

Abstract trans. of Akademiya Nauk SSSR, Otdeleniye
 Tekhnicheskikh Nauk, Vestiya Metallurgiya i Top-
 livo, 1960, no. 5, p. 137-141.

DESCRIPTORS: *Nickel alloys, *Chromium alloys,
 *Tungsten alloys, *Titanium alloys, *Aluminum alloys,
 Heat resistant alloys

The alloy studied was of constant Cr, W, and Ti con-
 tent (not specified) and varying aluminum and (in-
 versely) nickel content (0 to 16%). The solubility of
 aluminum in nickel-base solid solution was found to de-
 crease with decreasing temperature. At 1200°C solu-
 bility was 5.5% at 1100°C, 4.2% at 1000°C, 3% and
 (Metallurgy, TT, v. 6, no. 4) (over)

- I. Kornilov, I. I.
- II. Ozhinkova, O. V.
- III. Pryakhina, I. I.
- IV. AID-61-25
- V. Air Information Div.,
 Washington, D. C.
- VI. AD-254 394

177680

Office of Technical Services

Simulation by Scale Models of the Deformation
Processes in the Heat Treatment of Metals, by
V.A. Lomakin.

RUSSIAN, part. Iz Ak Nauk. SSSR, OTN, Met i Top,
pp 174-180.

CIA/FDD XI-1018
URTB ONLY

1974 - 1975

1974

1974 - 1975

Viscosity and Electrical Conductivity of
Aluminum-Antimony, and Indium-Antimony
Alloys in the Liquid State, by V. M. Glazov,
6 pp.

RUSSIAN; per, Iz Ak Nauk USSR, ~~EMI~~ Otdel Tekh
Nauk, Met i Toplov, No 5, 1960, pp 190-194.

MDF G-191
9092757

171, 533

Glazov, V. M.
VISCOSITE ET CONDUCTIBILITE ELECTRIQUE DES
ALLIAGES Al-Sb, Ga-Sb ET In-Sb A L'ETAT LIQUIDE
(Vyazkost i Elektroprovodnost' Splavov Alyumini-
Sur'ma, Pallii -Sur'ma i Indii -Sur'ma v Zhidkom
Sostoyanii) tr. by Baftalovlky. 26 Dec 61 [14]p. (Russian
text included) 18 refs. CEA Trans. no. R 1464 (text in
French).

Order from OTS or SLA \$1.60

62-24580

Trans. In French of Akad[emiya] Nauk SSSR. [Otdelenie
Tekhnicheskikh Nauk]. Izv[estiya: Metallurgiya i
Toplivo] 1960, no. 5, p. 190-194.

DESCRIPTORS: *Viscosity, *Electrical conductance,
*Alkali metal alloys, Aluminum alloys, Antimony alloys,
Gallium alloys, Indium alloys, Liquid metals.

(Metallurgy, TT, v. 8, no. 3)

62-24580

I. Glazov, V. M.
II. CEA-tr-R1464
III. Commissariat à l'Energie
Atomique (France)

Office of Technical Services

Churaev, P. V.

OBTENTION DES MICROPHOTOGRAPHIES ÉLEC-
TRONIQUES D'UNE PARCELLE DONNÉE DE LA
SECTION POLIE D'UN ÉCHANTILLON EXAMINÉ
(Poluchenie Elektronnykh Mikrofotografii s Zadannogo
Uchastka Shlifa Issleduemogo Obraztsa) [Obtaining
Electron Photomicrographs of a Given Area on Polished
Specimens Being Studied] tr. by B. Detrezvinsky.
9 Nov 61 [12]p. (foreign text included) 7 refs. CEA
Trans. no. R 1392.
Order from OTS or SLA \$1.60

62-13803

Trans. in French of Akad[emiya] Nauk SSSR,
Otde[lenie] Tekh[nicheskikh] Nauk. [Zvestiya: Metal-
lurgiya i Toplivo] 1960, no. 5, p. 221-223.

DESCRIPTORS: *Electron microscopy,
Photomicrography.

(Physics--Optics, TT, v. 10, no. 8)

62-13803

- I. Churaev, P. V.
- II. CEA-tr-R-1392
- III. Commissariat d l'Énergie
Atomique (France)

Office of Technical Services

Metallo-Ceramic Method of Obtained Alloyed
Moldings on the Basis of Molybdenum, by
A. V. Savin, 7 pp.

RUSSIAN, per, Is Ak Nauk SSSR, OTN,
Metallurgiya i Toplivo, No 6, 1960,
pp 47-50. 9670988

FTD MCL-952/1

Sci - Min/Met

169,301

Sep 61

Refining Metallic Lithium, by T. F. Fedorov,
F. I. Shampay, 10 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, OTN, Metal. i
Toplivo, No 6, 1960, pp 56-60. 9670744

FTD MEL-953/1

Sci - Min/Metal

1 Sept 61

165,896
Sept. 1961
TN 1 ES 1 No 11

Belashchenko, D. K.
PROPRIETES CINETIQUES DES ALLIAGES DE
METAUX LIQUIDES (Kineticheskie Svoistva Zhidkikh
Metallicheskikh Splavov) [Kinetic Properties of
Liquid Metal Alloys] Mme Boutleroff, tr. 24 Mar 62
[19p] (Russian text included) 14refs
CEA Trans. no. R 1557.
Order from OTS, SLA, or ETC \$1.60 TT-63-24271

Trans. in French of Akad[emiya] Nauk SSSR.
[Otdelenie Tekhnicheskikh Nauk]. Izvest[iya]:
Metallurgiya i Toplivo] 1960, no. 6, p. 89-93.

DESCRIPTORS: *Alloys, *Liquid metals, Dynamics,
Viscosity, Electrical conductance, Resistance
(Electrical), Magnetic properties.

(Metallurgy, TT, v. 11, no. 5)

TT-63-24271

I. Belashchenko, D. K.
II. CEA-tr-R1557
III. Commissariat à
l'Énergie Atomique,
Paris (France)

Office of Technical Services

Shmuk, E. I.
THERMODYNAMICS OF COAL PYRITE OXIDATION.
[1961] 10p. (2 figs. omitted) 17 refs.
Order from OTS or SLA \$1.10

62-10208

Trans. of [Akademiya Nauk SSSR. Otdelenie Tekhnicheskikh Nauk. Izvestiya]: Metallurgiya i Toplivo, 1960, no. 6, p. 177-182.

DESCRIPTORS: *Coal, *Pyrites, Oxidation, Thermodynamics, Thermochemistry.

On the basis of thermodynamic calculations, equilibrium constants and free energies were obtained for the pyrite oxidation reaction in relation to changes in temperature. The heat effects of pyrite oxidation were calculated. It was established that an increase in pressure favors pyrite oxidation by oxygen of the air. (Author)
(Chemistry--Physical, TT, v. 7, no. 9)

62-10208

I. Shmuk, E. I.

Office of Technical Services

Teumin, I. I.
METHODIK UND BESONDERE VERHÄLTNISSE BEIM
ANLEGEN ELASTISCHER SCHWINGUNGEN AN
METALLEGIEURNGEN (Methodology and Special Con-
ditions on Applying Elastic Vibrations to Metal Alloys).
11p.
Order from TIB \$2.00

Trans. in German of Akademiya Nauk SSSR. Otdelenie
Tekhnicheskikh Nauk. Izvestiya: Metallurgiya i Toplivo,
1961, no. 1, p. 24-30.

DESCRIPTORS: *Vibration mechanisms, Elasticity,
*Metals, *Alloys

(Metallurgy, TT, v. 9, no. 11)

62-27298

I. Teumin, I. I.
II. Technische Informations-
bibliothek, Hannover
(West Germany)

HB 6371

Office of Technical Services

COALESCENCE, SPHEROIDIZATION, AND HEALING OF MICROPORES
AND MICROCRACKS IN IRON ALLOYS, BY E. N. POGREBNOY,
11 PP.

RUSSIAN, PER, IZ AK NAUK SSSR, OTDEL TEKH NAUK,
METAL I TOPLIVO, NO 1, 1961, PP 58-63. 9678199

FTD-TT-62-519

SCI - MINERALS/METALS
11 OCT 62

212,361

INFLUENCE OF ALLOYING ELEMENTS ON THE PROPERTIES OF
STEEL, BY M. P. BRAUM, 19 PP.

RUSSIAN, PER, IZ AK NAUK SSSR, OTDEL TEKH NAUK,
METAL I TOPLIVO, NO L, 1960, PP 64-73. 9678199

FTD-TT-62-519

SCI -MINERALS/METALS

11 OCT 62

212,362

LOCAL PLASTIC DEFORMATION DURING BRITTLE DESTRUCTION
OF COMMERCIAL IRON, BY B. S. KASATKIN, 19 PP.

RUSSIAN, PER, IZ AK NAUK SSSR, OTDEL TEKH NAUK,
METAL I TOPLIVO, NO 1, 1960, PP L08-116. 9678199

FTD-TT-62-519

SCI - MINERALS/METAL
11 OCT 62

212,363

Bu. of Mines CP-443-67

R-7940-D

2 Feb 67

Properties and phase composition of alloys of boron
with carbon

By: Zhuravlev, N. N.

From: Izvestiia, Otdeleniye tekhnicheskikh nauk,
Metallurgiya i toplivo, 1961 No 1, 133-141 (9 pp)

Russian - est for wds:

Please translate and type 1 ~~summary~~ copy.

Document can be cut. original

Some Peculiarities of the Reduction of Hardened
Pellets From Southern Concentrates by Gases, by G. V.
Gubin, et al.

RUSSIAN, per. Iz Ak Nauk SSSR, Otdel Tekh Nauk,
Metal i Toplivo, No 1, 1961, pp 147-149.

HB 5181
\$2.85

Sci

Aug 61

163,168

The Use of Radioactive Radiation for Controlling
the Ash Content of Coal, by V. D. Goroshko,
B. P. Nikonorova.

RUSSIAN, per, Iz Ak Nauk SSSR Otd Tekh Nauk
Metal i Toplivo, No 1, 1961, pp 152-157

NIL M 8850

Sci - Phys
Mar 63

~~224,282~~
224,282

(SF-1818)

Nikolay Mikhaylovich Karavayev, 5 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk --
Metall i Toplivo, No 1, 1961, pp 181-184.

JPRS 4723

USSR

Biog

Jul 61

160,484

Natural Gas in the Reduction Reactions of Iron Ores
in a Fluidized Bed, by K. P. Lavrovskiy, A. L.
Rozenal', A. Kh. Eglit.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk,
Metal i Toplivo, No 2, 1961, pp 13-19.

HB 5179

Sci -

Aug 61

163,166

Reduction of Lead Losses in Slags by Electro-
Chemical Methods, by A. N. Kvyatkovskiy, et al.

RUSSIAN, per, Iz Ak Nauk SSSR Otdel Tekh Nauk
Metal i Toplivo, Vol II, 1961, pp 43-48.*

MLL RTS 2148

Sci - M/M, Electron
May 63

230,643

Kinetics of Reduction by Carbon Monoxide of Free
Lead Oxide and Lead Oxide Combined in Silicates,
by L. G. Berezkina, et al.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk
Metal i Toplivo, Vol II, 1961, pp 49-54.

NIL RTS 2149

Sci - Phys, Chem
May 63

230,644

Heat Content of Slags in the System Iron-Oxide
Zinc-Oxide Silica, by Z. F. Gulyanitskaya.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk
Metal i Toplivo, Ser I Vol II, 1961, pp 55-59.

HLI RTS 2150

Sci - Phys
May 63

230,645

Initial Stages in the Plastic Deformation of Iron ,
by V. E. Koshnov, I. I. Zlochevakaya.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk
Metal i Toplivo, Vol II, 1961, pp 60-63.

MLL RTS 21521

Sci - M/M
May 63

230,646

Investigation of the Hot Rolling of Aluminium in
Vacuum and in Air, by I. M. Pavlov, et al.

RUSSIAN, per, Is Ak Nauk SSSR, Otdel Tekh Nauk
Metal i Toplivo, Vol II, 1961, pp 64-67.

NLL RTS 2152

Sci - M/M
May 63

230,647

The Effect of Small Degrees of Plastic ~~Str~~ Strain
on Properties of DL6 Aluminium Alloy With Different
Grain Sizes, by E. I. Shilova, O. G. Nikteva.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk
Metal i Toplivo, Vol II, 1961, pp 68a-71.

NIL NTS 2153

Sci - N/M
May 63

230,648

Interaction of Impurities During the Zone Recrystallization of Antimony, by V. N. Vigdorovich.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk
Metal i Toplivo, Vol II, 1961, pp 72-76.

NLL RTS 2154

Sci - M/M
May 63

239,649

Basic Stages and Metallurgical Features of the Arc
Welding Process, by A. A. Brokhin.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk
Metal i Toplivo, No Vol II, 1961, pp 77-82.

NLL RPS 2155

Sci - M/M
May 63

230,650

Properties of Liquid Alloys in Systems With
Unlimited Solidus Solubility, by A. A. Vertman,
A. M. Samarin.

RUSSIAN, per, Iz Ak Nauk SSSR Otdel Nauk
Metal i Toplivo, Vol II, 1961, pp 83-87.

MLL RTS 2156

Sci - M/M
May 63

250,651

On the Kinetic Characteristics of Liquation
Micro-Inhomogeneities in the Crystallization
of Solid Solutions, by V. M. Glazov,
Liu Chen-yuan, 13 pp.

RUSSIAN, per, Iz Ak Nauk USSR, Otdel Tekh Nauk,
Met i Toplov, No 2, 1961, pp 99-107.

MDF G-206
9092759

Sci
Oct 61

171, 532

High Speed Nitriding by Induction Heating, 2 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, OTN, Metallurgiya,
No 2, 1961, pp 132-140.

CIA/FDD XX-1040

NOT RELEASABLE TO FOREIGN NATIONALS

Sci - Chem

Sep 61

USIB INTERNAL USE ONLY

On the water of the Reaction of Certain Refractory
Metals and Their Solid Solutions With Carbon,
E. G. Gorbunov, Yu. V. Levinshiy, V. I. Podyakov,

Metallurg, 1967, 12, At. No. 353R, Otdel Tekhn. Nauk,
Moscow, No. 3, 1961, pp 147-149. 9059712

AKX Tr-4871

100 - Chem.
100 - 60

192,167

(DC-61/8)

General Meeting of the ~~USSR~~ Department of
Mechanical Sciences of the Academy of Sciences
USSR, 8/6 pp.

RUSSIAN, per, Iz. Ak. Nauk, SSSR Otdel Tekh
Nauk - Metal i Toplivo, No 2, 1961, pp 182-184.

JPRS 8890

Vol - Misc
Oct 61

171, 889

Hypothesis on Universal Ejection Properties of Turbulent
Jets of Gas, and Its Application, by O. V. Yakovlevskiy,

32 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk Metal
i Toplivo, No 3, 1961, pp 40-54. 9691144

DDC RSIC-108

Sci - Fuels & Prop
Feb 64

250,737

THE EFFECT OF SMALL ADDITIONS OF NICKEL AND COBALT
ON THE SINTERING OF IRON POWDER, BY R. A.
ANDRYEVSKIY, I. M. FEDORCHENKO.

RUSSIAN, PER, IZ AK NAUK SSSR, OTDEL TEKH NAUK,
METALLURG I TOPLIV, NO 3, 1961, PP 50-54.

NLL M. 3770

SCI - MIN/METALS

OCT 62

214,742

Certain Problems of Thermal Stability,
by M. Yu. Bal'shin, Tai Shou Hwei, 9 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh
Nauk, Metal i Toplivo, No 3, 1961, pp 73-76.
9672016

FTD-TT-61-160

Sci - Engr

176, 144

18 Dec 61

Voloskin, V. A., Vysotskaya, A. L., Gansenko, V. E.,
and Urazovskii, S. S.

THE THERMODYNAMICS OF COKING [Zur Thermodynamik des Verkokungsprozesses]. [1963] [11p] 8 refs
C. E. Trans. 2997.

Order from OTS, SLA, or ETC \$1.60 TT-63-23982

Trans. of Akad[emiya] Nauk SSSR. [Otdelenie Tekhnicheskikh Nauk]. [Izvestiya] i [Mekhanizmy] i [Toplivo], 1961, no. 3, p. 188-190.

Another trans. is available in German from TIB \$2.33.

DESCRIPTORS: *Thermodynamics, *Coke, Coal, Heat of formation, Entropy, Calorimeters, Pyrolysis.

This study determined the heats of formation of the solid products in the thermal decomposition of C, gas coal and its vitrinite. Entropy determinations were made from measurements of the heat capacity at low temperatures. (Author)

TT-63-23982

- I. Voloskin, V. A.
- II. Vysotskaya, A. L.
- III. Gansenko, V. E.
- IV. Urazovskii, S. S.
- V. CE Trans-2997
- VI. Central Electricity
Generating Board
(Ct. Brit.)

(Materials--Fuels, TT,
v. 11, no. 8)
Office of Technical Services

Investigation of the Effect of a Liquid ~~SHOCK~~
Phase on the Movement of the Gas Stream in a ~~SC~~
Cold Model of a Blast Furnace, by Wang Te-Jung,
L. M. Tsylev.

RUSSIAN, per, Izvest Ak Nauk SSSR, OTN, Mat 1
Toplivo, No 4, 1961, pp 12-17.

HB 6034

Sci-M/M
Jan 64

246,358

Electrical Conductivity of Melts in the Potassium
Oxide - Potassium Dioxide System, by V. S. Palikhin,
V. A. Bernichenko, 7 pp.

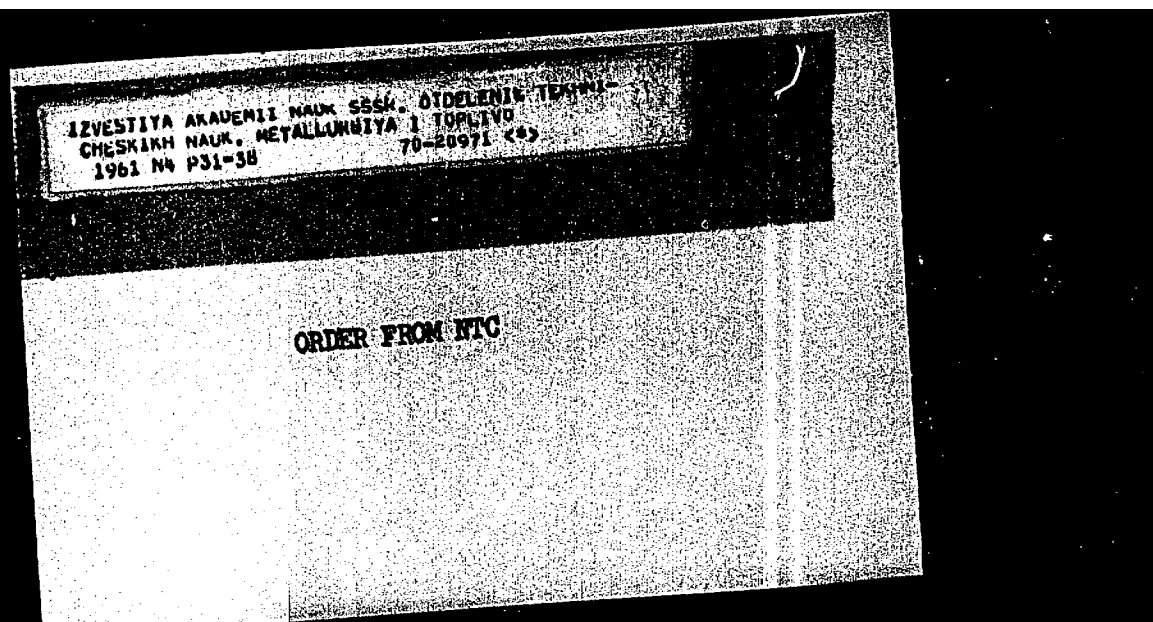
Известия, отд. Ин-та Хим. ССРС, Отдел Физ. Хим.,
№ 4, 1961.

H. Cygielski, B.Sc., No 1/4/6
115, Brent Lane
Dartford, Kent - England

Sci - Chem, ind/med

Nov 61

174,555



Glazov, V. M.
CONSTRUCTION OF THE SOLIDUS LINE BY THE
METHOD OF MEASURING MICROHARDNESS. [1962]

[7]p. 11 refs.

Order from OTS or SLA \$1.10

62-10640

Trans. of A[kademiya] N[auk] SSSR. O[tdelenie] T[ekhnicheskikh] N[auk]. Izv[estiya]: Met[allurgiya] i Topl[ivo] 1961, no. 4, p. 39-42.

DESCRIPTORS: *Aluminum alloys, *Copper alloys, *Bismuth alloys, Microstructure, Hardness, Grains (Metallurgy), Liquids, Solids, Diffusion, Phase studies, Crystal, Crystallization.

The possibility of using the method of measuring the microhardness to determine the solid line by investigating the composition in the center of grains of alloys not crystallized in equilibrium is analyzed. The method proposed is justified experimentally by the example of (Physics-Solid State, TT, v. 8, no. 6) (over)

62-10640

I. Glazov, V. M.

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Office of Technical Services

Brittle Fracture of Alloyed Steel, by M. P. Braun
et al.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk,
No 4, 1961, pp 43-49.

Metal i Toplivo

H. Cygielski, B. Sc, No 3/1-1
115, Brent Lane
Dartford, Kent - England

Sci - Chem, Min/Metal

Nov 61

174,557